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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mingqiu Sun

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9088

21186

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01/03/2007

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EXAMINER

TANG, KENNETH

ART UNIT

PAPER NUMBER

2195

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/876,645

Applicant(s)

SUN ET AL.

Examiner

Kenneth Tang

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to the Response on 12/7/06. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejections.
2. Claims 1-36 are presented for examination.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1) in view of Sasou et al. (hereinafter Sasou) (US 5,463,208), and further in view of Nakamura et al. (hereinafter Nakamura) (US 2001/0027477 A1).**
4. As to claim 1, Campbell teaches a method to be performed by a data processing system to improve fault tolerance ([0044], Abstract) comprising:  
  
providing distributed queuing of workflows (workflow manager), whose execution is requested by one or more execution-requesting clients, among a plurality of workflow engines (page 5, [0084], page 6, [0085]);
5. Campbell teaches a first workflow engine for an execution-requesting client. Campbell is silent on sending an explicit and delayed acknowledgement only if a workflow is successfully

Art Unit: 2195

completed, else assigning the workflow to a second workflow engine by sending it a workflow assignment message.

6. In the Applicant's specification, "workflow" is defined to have a starting task and a finishing task with the possibility of intermediate tasks. Applicant also defines the "explicit and delayed acknowledgements" to be notification when the final task is completed.
7. Sasou teaches processing tasks and workflows (first task through last task) wherein notification occurs when the last task is completed (*see Abstract, col. 7, lines 9-12, etc.*). The notification in response to the last task completed satisfies the Applicant's definition of an explicit and delayed acknowledgement. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Campbell with Sasou because it would reduce loading and costs (*col. 2, lines 4-10, etc.*).
8. Campbell and Sasou are silent on assigning workflow to a second workflow engine by sending it a work assignment message, if the first workflow is not completed. However, Nakamura teaches a workflow system that determines whether the workflow/process was successfully completed or not, and if it is not completed, then identifying another terminal apparatus to send a notification to perform a work assignment (update, for example) (Abstract, [0011], [0009]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Campbell and Sasou's workflow system to include the features of Nakamura's workflow system because it would increase the flexibility of the workflow system by allowing for various flows to become possible when allowing use of other nodes, for example ([0047]-[0048]).

Art Unit: 2195

9. As to claim 2, Campbell teaches wherein providing is performed by a load manager (workflow manager) (*page 5, [0084], page 6, [0085]*).
10. As to claim 3, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).
11. As to claim 4, Sasou teaches notification (*see Abstract*) and Campbell teaches wherein the explicit and delayed acknowledgement can be performed by email [0093]. It is well known in the art that messaging from email, for example, can be certified. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of certified messaging because this provides a guarantee in the delivery.
12. As to claim 5, Campbell teaches that all communication types are workflow enabled and pass through the load manager (workflow manager) (*page 5, [0084]*).
13. As to claim 6, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).
14. As to claim 7, Campbell teaches wherein the certified messaging capability is performed by a certified message receiver forming part of the workflow (*page 1, [0004], page 5, [0084]*).

Art Unit: 2195

15. As to claim 8, Sasou teaches sending an explicit and delayed acknowledgement to the execution-requesting client if the workflow is completed by the second workflow engine (*see Abstract, col. 7, lines 9-12, etc.*).

16. As to claims 9-16, they are rejected for the same reasons as stated in the rejection of claims 1-8, respectively.

17. As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Campbell teaches the computer operating in a fault-tolerant manner and requesting a workflow execution on behalf of a client (*page 2, [0043] and [0044], page 4, [0061] and [0063]*).

18. As to claims 18-22, they are rejected for the same reasons as stated in the rejection of claims 2, 4, 7, 8, and 17, respectively.

19. As to claim 23, it is rejected for the same reasons as stated in the rejection of claims 1 and 2.

20. As to claims 24-27, they are rejected for the same reasons as stated in the rejection of claims 4, 7, 8, and 17, respectively.

Art Unit: 2195

21. As to claims 28-33, they are rejected for the same reasons as stated in the rejection of claims 2, 4, 7, 8, 17 and 23, respectively.

22. As to claims 34-36, they are rejected for the same reasons as stated in the rejection of claims 4, 7 and 8, respectively.

***Response to Arguments***

23. During patent examination, the pending claims must be “given their broadest reasonable interpretation consistent with the specification.” *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05; 162 USPQ 541, 550-51 (CCPA 1969).

24. Applicant’s amendment has overcome the Examiner’s 35 U.S.C. 101 rejections.

25. *Applicant argues that in Sasou, there is a notification sent whether recording is successfully completed or not, which is different than the claims indicating that an explicit and delayed acknowledgement is sent only if a workflow is successfully completed.*

In response, in the Applicant’s specification, Applicant defines the “explicit and delayed acknowledgements” to be notification when the final task is completed. The Abstract of Sasou states that “the notification section supplies a processing completion signal indicating completion of the series of tasks to the main CPU when the last task is completed”. This teaching of Sasou

Art Unit: 2195

satisfies the Applicant's definition of an explicit and delayed acknowledgement. Applicant argues that Sasou's invention teaches also giving notification even at times when not successfully completed, which is different than the claim language which sends an explicit and delayed acknowledgement only if a workflow is successfully completed. However, those particular notifications in response to non-completion are not an explicit and delayed acknowledgement. The notification of successful completion is an explicit and delayed acknowledgement. All other notifications are not explicit and delayed acknowledgements.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2195

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kt  
12/21/06

  
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